

CLAIMS:

1. A system to provide software program control of cache management, comprising:

5 a processor configured to generate DMA commands for the management of a cache on the execution of a software program on the processor; and

a DMA controller coupled to the processor, configured to execute the DMA commands for the management of a cache.

10 2. The system of Claim 1, further comprising a cache coupled to the DMA controller, the system configured for the execution of the DMA commands for the management of a cache on the DMA controller to manage the operation of the cache coupled to the DMA controller.

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3. The system of Claim 1, wherein at least one of the DMA commands is a get command and at least one of the DMA commands is a put command.

20 4. The system of Claim 1, wherein at least one of the DMA commands is a flush command.

5. The system of Claim 1, wherein at least one of the DMA commands is a zero command.

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6. The system of Claim 1, wherein the parameters of the DMA commands comprise class line, tag, transfer size, and effective address low.

30 7. The system of Claim 1, wherein the cache is a DMA cache tightly coupled to the DMA controller.

8. The system of Claim 1, wherein the cache is a cache

for system memory.

9. A method for cache management in a system comprising a DMA controller and a processor, the method comprising the
5 steps of:

running software on the processor to generate DMA commands for management of a cache;

issuing the DMA commands to the DMA controller; and
executing the DMA commands.

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10. The method of Claim 9, wherein a cache is coupled to the DMA controller, and executing the DMA commands on the DMA controller manages the operation of the cache.

15 11. The method of Claim 9, wherein at least one of the DMA commands is a put command and wherein at least one of the DMA commands is a get command.

12. The method of Claim 9, wherein at least one of the
20 DMA commands is a flush command.

13. The method of Claim 9, wherein the cache is a DMA cache tightly coupled to the DMA controller.

25 14. The method of Claim 9, wherein the cache is a cache for system memory.

15. A computer program product for cache management in a system comprising a DMA controller and a processor, the
30 computer program product having a medium with a computer program embodied thereon, the computer program comprising:

computer code for running software on the processor to generate DMA commands for management of a cache;

computer code for issuing the DMA commands to the DMA controller; and

computer code for executing the DMA commands.

5 16. The computer program product of Claim 15, wherein at least one of the DMA commands is a get command.

17. The computer program product of Claim 15, wherein at least one of the DMA commands is a put command.

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18. The computer program product of Claim 15, wherein at least one of the DMA commands is a flush command.

15 19. The computer program product of Claim 15, wherein at least one of the DMA commands is a zero command.

20. The computer program product of Claim 15, wherein the cache is a DMA cache tightly coupled to the DMA controller.

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21. The computer program product of Claim 15, wherein the cache is a cache for system memory.